Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

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Director
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Regional Director

Federal Operating Permit
Article 1

This permit is based upon the requirements of Title V of the Federal Clean Air Act and Chapter 80, Article 1, of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, and 9VAC5-80-50 through 9VAC5-80-300, of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name:	Arkema, Inc.
Facility Name:	Arkema, Inc.
Facility Location:	601 Tightsqueeze Industrial Road Chatham, Virginia 24531
Registration Number:	30954
Permit Number:	BRRO-30954

This permit includes the following programs:
Federally Enforceable Requirements - Clean Air Act

_____	_____
Effective Date	Expiration Date
_____	_____**DRAFT**_____
Signature Date	Regional Director

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Facility Information

Permittee
Arkema, Inc.
601 Tightsqueeze Industrial Road
Chatham, Virginia 24531

Responsible Official
Mark Spencer
Plant Manager

Facility
Arkema, Inc.
601 Tightsqueeze Industrial Road
Chatham, Virginia 24531

Contact Person
John Sullivan
HES Manager
(434) 433-0311

County-Plant Identification Number: 143 - 00138

Facility Description: NAICS 325211: Plastics Material and Resin Manufacturing
325199: All Other Basic Organic Chemical Manufacturing
325998: All Other Miscellaneous Chemical Product and Preparation Manufacturing

Emission Units

Process Equipment to be operated consists of:

Oligomers Chemical Manufacturing Process Unit (CMPU)

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description *	PCD ID	Pollutant Controlled	Applicable Permit Date
BL-2015	S2540a & S2540b	Commercial blender/reactor system for blending and manufacturing oligomers	4,000 gallons	Vapor Control System (VCS), consisting of two knock-out pots followed by two Advanced Environmental Systems thermal oxidizers in parallel	VCS-2540a & VCS-2540b	VOC	9/22/2021
BL-4550	-	Blender	-	-	-	-	-
L-2104	-	Product tank (T-2104) loading rack	6,000 gallons/hr	-	-	-	-
L-2107	-	Product tank (T-2107) loading rack	6,000 gallons/hr	-	-	--	-
L-2530	-	Light waste loading rack	9,000 gallons/hr	-	-	-	-
L-2532	-	Heavy waste loading rack	9,000 gallons/hr	-	-	-	-
R-0301	S2540a & S2540b	Semi-commercial reactor system for the manufacture of acrylate-based oligomers and oligomer blends	2,600 gallons	Vapor Control System (VCS), consisting of two knock-out pots followed by two Advanced Environmental Systems thermal oxidizers in parallel	VCS-2540a & VCS-2540b	VOC	9/22/2021

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description *	PCD ID	Pollutant Controlled	Applicable Permit Date
R-0501	S2540a & S2540b	One agitated tank reactor system for the manufacture of urethane- and epoxy-based acrylates	12,500 lbs/hr	Vapor Control System (VCS), consisting of two knock-out pots followed by two Advanced Environmental Systems thermal oxidizers in parallel	VCS-2540a & VCS-2540b	VOC	9/22/2021
R-2001	S2540a & S2540b	Commercial reactor system for the manufacture of oligomers and oligomer blends	2,600 gallons	Vapor Control System (VCS), consisting of two knock-out pots followed by two Advanced Environmental Systems thermal oxidizers in parallel	VCS-2540a & VCS-2540b	VOC	9/22/2021
R-4001	-	Reactor	-	-	-	-	-
V-0320	S2540a & S2540b	Oligomer feed tank	332 gallons	Vapor Control System (VCS), consisting of two knock-out pots followed by two Advanced Environmental Systems thermal oxidizers in parallel	VCS-2540a & VCS-2540b	VOC	9/22/2021

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description *	PCD ID	Pollutant Controlled	Applicable Permit Date
V-0532	S2540a & S2540b	Acrylate feed storage tank	1,400 gallons	Vapor Control System (VCS), consisting of two knock-out pots followed by two Advanced Environmental Systems thermal oxidizers in parallel	VCS-2540a & VCS-2540b	VOC	9/22/2021
V-2030	S2540a & S2540b	Process feed tank	372 gallons	Vapor Control System (VCS), consisting of two knock-out pots followed by two Advanced Environmental Systems thermal oxidizers in parallel	VCS-2540a & VCS-2540b	VOC	9/22/2021
V-2032	S2540a & S2540b	Acrylate feed tank	2,514 gallons	Vapor Control System (VCS), consisting of two knock-out pots followed by two Advanced Environmental Systems thermal oxidizers in parallel	VCS-2540a & VCS-2540b	VOC	9/22/2021

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description *	PCD ID	Pollutant Controlled	Applicable Permit Date
V-2034	S2540a & S2540b	Oligomer feed tank	1,100 gallons	Vapor Control System (VCS), consisting of two knock-out pots followed by two Advanced Environmental Systems thermal oxidizers in parallel	VCS-2540a & VCS-2540b	VOC	9/22/21
V-4030	-	Blending tank	654 gallons	-	-	-	-
V-4032	-	Feed tank	3,550 gallons	-	-	-	-
V-4533	-	Storage tank	3,200 gallons	-	-	-	-
T-2104	S2540a & S2540b	Product storage tank (oligomer resin) (1995)	8,800 gallons	Vapor Control System (VCS), consisting of two knock-out pots followed by two Advanced Environmental Systems thermal oxidizers in parallel	VCS-2540a & VCS-2540b	VOC	9/22/2021
T-2107	S2540a & S2540b	Product storage tank (oligomer resin) (1995)	8,800 gallons	Vapor Control System (VCS), consisting of two knock-out pots followed by two Advanced Environmental Systems thermal oxidizers in parallel	VCS-2540a & VCS-2540b	VOC	9/22/2021

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description *	PCD ID	Pollutant Controlled	Applicable Permit Date
T-3002	S2540a & S2540b	Toluene storage tank (1995)	11,300 gallons	Vapor Control System (VCS), consisting of two knock-out pots followed by two Advanced Environmental Systems thermal oxidizers in parallel	VCS-2540a & VCS-2540b	VOC	9/22/2021
T-3005	S2540a & S2540b	Butyl acrylate feed storage tank (1995)	9,400 gallons	Vapor Control System (VCS), consisting of two knock-out pots followed by two Advanced Environmental Systems thermal oxidizers in parallel	VCS-2540a & VCS-2540b	VOC	9/22/2021
T-3016	S2540a & S2540b	Acrylic acid storage tank (1995)	11,300 gallons	Vapor Control System (VCS), consisting of two knock-out pots followed by two Advanced Environmental Systems thermal oxidizers in parallel	VCS-2540a & VCS-2540b	VOC	9/22/2021
T-3026	-	Epoxy storage tank (1995)	9,794 gallons	-	-	-	9/22/2021
T-3027	-	Epoxy storage tank (1999)	15,400 gallons	-	-	-	9/22/2021

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description *	PCD ID	Pollutant Controlled	Applicable Permit Date
T-2530	-	Light waste (wastewater) storage tank (1995)	27,800 gallons	Vapor Control System (VCS), consisting of two knock-out pots followed by two Advanced Environmental Systems thermal oxidizers in parallel	-	-	9/22/2021
T-2532	S2540a & S2540b	Heavy (hazardous) waste storage tank (1995)	6,500 gallons	Vapor Control System (VCS), consisting of two knock-out pots followed by two Advanced Environmental Systems thermal oxidizers in parallel	VCS-2540a & VCS-2540b	VOC	9/22/2021
T-3038	S2540a & S2540b	Raw material (IPDI) storage tank (2001)	10,293 gallons	Vapor Control System (VCS), consisting of two knock-out pots followed by two Advanced Environmental Systems thermal oxidizers in parallel	VCS-2540a & VCS-2540b	VOC	9/22/2021
WWTP	-	Wastewater treatment plant	-	-	-	-	N/A

*The Size/Rated capacity and PCD efficiency is provided for informational purposes only, and is not an applicable requirement.

Process Equipment Requirements - Oligomer Chemical Manufacturing Process Unit (CMPU)

Limitations

1. **Process Equipment Requirements: Oligomer CMPU - Limitations** – Volatile organic compound (VOC) emissions from the following oligomer processes:

   - reactor system (R-0501)
   - acrylate feed storage tank (V-0532),
   - reactor system (R-2001),
   - reactor system (R-0301),
   - acrylic acid storage tank (T-3016),
   - toluene storage tank (T-3002),
   - acrylate storage tank (T-3005),
   - light waste storage tank (T-2530)
   - heavy waste storage tank (T-2532),
   - blender/reactor system (BL-2015),
   - raw material storage tank (T-3038),
   - two product storage tanks (T-2104, T-2107), and
   - feed tanks V-0320, V-2030, V-2034, and V-2032

   shall be controlled by a Vapor Control System (VCS-OLIG). VCS-OLIG is comprised of two knock-out pots followed by two thermal oxidizers in parallel. The overall (capture and destruction) VOC control efficiency of VCS-OLIG shall be 95% or greater as measured by testing. The thermal oxidizers shall maintain a minimum temperature of 1400º F or the minimum temperature that was determined during the most recent DEQ-approved performance test that demonstrated at least 95% overall VOC control, on a 3-hour rolling average. VOC emissions from the tanks are required to be controlled by the VCS-OLIG only when the VCS is controlling VOCs from any of the reactor or blender/reactor systems (R-0501, R-2001, R-0301 or BL-2015) or during filling or dispensing from a tank. VOC emissions from the reactor or blender/reactor systems (R-0501, R-2001, R-0301 and BL-2015) and the two knock-out pots are required to be controlled by the thermal oxidizers at all times.
   (9VAC5-80-110 and Condition 1 of 9/22/2021 Permit Document)

2. **Process Equipment Requirements: Oligomer CMPU - Limitations** – The approved fuels for the thermal oxidizers are natural gas, liquefied petroleum gas or propane. A change in the fuels may require a permit to modify and operate.
   (9VAC5-80-110 and Condition 6 of 9/22/2021 Permit Document)

3. **Process Equipment Requirements: Oligomer CMPU – Limitations -** Emissions (controlled and fugitive) from the operation of the urethane- and epoxy-based acrylate manufacturing facility (R-0501 reactor system, T-3016 and V-0532), including vessel cleaning and fugitive emissions, shall not exceed the limits specified below:

Volatile Organic Compounds 0.2 lbs/hr 0.88 tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits and emission factors supplied by the permittee. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. (9VAC5-80-110 and Condition 17 of 9/22/2021 Permit Document)

4. **Process Equipment Requirements: Oligomer CMPU – Limitations -** Emissions (controlled and fugitive) from the operation of the acrylic based oligomer manufacturing and blending facility using two reactor systems (R-0301 and R-2001), acrylic acid storage (T-3016), toluene storage (T-3002), acrylate storage (T-3005), heavy waste storage (T-2532), light waste storage tank (T-2530), blender/reactor system (BL-2015), and feed tanks (V-0320, V-2030, V-2032, and V-2034), including vessel cleaning, shall not exceed the limits specified below:

   Volatile Organic Compounds 20.0 lbs/hr 1.9 tons/yr

   These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits.
   (9VAC5-80-110 and Condition 18 of 9/22/2021 Permit Document)

5. **Process Equipment Requirements: Oligomer CMPU – Limitations -** Visible emissions from each thermal oxidizer shall not exceed five percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.
   (9VAC5-80-110 and Condition 23 of 9/22/2021 Permit Document)

6. **Process Equipment Requirements: Oligomer CMPU – Limitations -** At all times, including periods of start-up, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate the affected source, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions.

   The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment and process equipment which affect such emissions:

   a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.

   b. Maintain an inventory of spare parts.

   c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.

d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures, prior to their first operation of such equipment. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.
(9VAC5-80-110 and Condition 29 of 9/22/2021 Permit Document)

Monitoring

7. **Process Equipment Requirements: Oligomer CMPU – Monitoring -** The thermal oxidizers as described in Condition 1 shall each be equipped with a device to continuously measure and record the thermal oxidizer chamber temperature. The monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the thermal oxidizer is operating. The valve between each knock-out pot and the thermal oxidizers shall be equipped with a device to continuously monitor and record whether the valve is open or closed. If closed, all VOCs are required to be collected in the knock-out pots for eventual treatment by the thermal oxidizers. If open, the thermal oxidizer shall be at the minimum temperature according to Condition 1.
(9VAC5-80-110 and Condition 2 of 9/22/2021 Permit Document)

8. **Process Equipment Requirements: Oligomer CMPU – Monitoring -** At least one time per calendar week during which the CMPU operates, the permittee shall observe each thermal oxidizer (TO-2540a and TO-2540b) stack for at least two minutes while the process is operating to check for visible emissions. If the permittee observes visible emissions at any time, it shall:

   a. Take timely corrective action such that the thermal oxidizer with visible emissions resumes operation with no visible emissions, or,

   b. Conduct a visible emissions evaluation (VEE) on the thermal oxidizer stack with visible emissions, in accordance with EPA Test Method 9 (40 CFR 60, Appendix A) for a minimum of six minutes, to determine if visible emissions from each of the thermal oxidizers are five percent opacity or less. If any of the 15-second observations exceed five percent opacity, the observation period shall continue until a total of 60 minutes of observation have been completed. Timely corrective action shall be taken, if necessary, such that the thermal oxidizer (TO-2540a and TO-2540b) resumes operation within the five percent opacity limit.

   The permittee shall maintain a thermal oxidizer stack observation log to demonstrate compliance. The log shall include the date and time of the observations, whether or not

there were visible emissions, the results of all VEEs, any necessary corrective action, and the name of the observer. If the thermal oxidizer has not been operated for any period during the week it shall be noted in the log book.

After conducting the weekly visible emissions observations for a six-month period without observing any visible emissions, the permittee may reduce the frequency of visible emissions observations from once per week to once per month. The permittee shall conduct the once-per-month observations in accordance with the procedures and requirements described above. If visible emissions are observed from the stack at any time, the corrective action procedures and Method 9 testing described above shall be immediately instituted. After correction of the opacity problem, the permittee shall resume weekly visible emissions observations. Once weekly visible emissions observations are conducted for a six-month period without observation of any visible emissions, a monthly schedule may again be instituted for the stack.
(9VAC5-50-20 E and 9VAC5-80-110 E & K)

Recordkeeping

9. **Process Equipment Requirements: Storage Tanks (T-2530) – Records -** The permittee shall keep readily accessible records showing the dimensions and an analysis showing the capacity of the Light Waste Storage Tank (T-2530). The records shall be kept for the life of the storage tank.
(9VAC5-80-110, 40 CFR 60.116b (b) and Condition 15 of 9/22/2021 Permit Document)

10. **Process Equipment Requirements: Oligomer CMPU – Records -** The permittee shall maintain records of emissions data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Blue Ridge Regional Office. These records shall include, but are not limited to:

    a. Monthly and annual production of acrylate-based oligomers/monomers and blended products and use of solvent for vessel cleaning sufficient to calculate VOC emissions (controlled and fugitive) and to demonstrate compliance with Condition 4. Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.

    b. Monthly and annual production of urethane acrylates and epoxy-based acrylates and use of solvent for vessel cleaning sufficient to calculate VOC emissions and to demonstrate compliance with the annual emissions limits (controlled and fugitive) in Condition 3. Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.

    c. Records of thermal oxidizer chamber temperature as required in Conditions 1 and 7.

    d. Records of pressure in the knock-out pots and any atmospheric releases (malfunctions).

e. Records of the position (open or closed) of the valve between the knock-out pots and each thermal oxidizer as required by Condition 7.

f. Records of all stack tests, visible emission evaluations and performance evaluations.

g. Records of tank filling and dispensing (times, dates and confirmation that the thermal incinerator chamber is at the correct temperature).

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9VAC5-80-110 and Condition 25 of 9/22/2021 Permit Document)

Testing

11. **Process Equipment Requirements: Oligomer CMPU – Testing -** The permitted facility shall be constructed to allow for emissions testing upon reasonable notice at any time, using appropriate methods. This includes constructing the facility/equipment such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and providing a stack or duct that is free from cyclonic flow. Sampling ports shall be provided when requested at the appropriate locations and safe sampling platforms and access shall be provided.
(9VAC5-80-110 and Condition 16 of 9/22/2021 Permit Document)

12. **Process Equipment Requirements: Oligomer CMPU – Testing -** If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate method(s) in accordance with procedures approved by the DEQ.
(9VAC5-80-110)

40 CFR 63 (MACT) Subpart VVVVVV – NESHAP for Chemical Manufacturing Area Sources (Oligomer CMPU)

Limitations

13. **MACT Subpart VVVVVV – Standards and Compliance Requirements -** Each process vessel must be equipped with a cover or lid that must be closed at all times when it is in metal HAP service, except for manual operations that require access, such as material addition and removal, inspection, sampling and cleaning. This requirement does not apply to process vessels containing only metal HAP that are in a liquid solution or other form that will not result in particulate emissions of metal HAP (e.g., metal HAP that is in ingot, paste, slurry, or moist pellet form or other form).
(9VAC5-80-110 and 40 CFR 63.11495 (a) (1))

14. **MACT Subpart VVVVVV – Standards and Compliance Requirements –** The permittee shall repair any leak within 15 calendar days after detection of the leak, or document the

reason for any delay of repair. For the purposes of this condition, a leak will be considered "repaired" if a condition specified in Condition 14.a, 14.b or 14.c is met.

a. The visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated, or

b. No bubbles are observed at potential leak sites during a leak check using soap solution, or

c. The system will hold a test pressure.

(9VAC5-80-110 and 40 CFR 63.11495 (a) (4))

15. **MACT Subpart VVVVVV – Standards and Compliance Requirements –** *General duty*. At all times, the permittee shall operate and maintain any affected CMPU, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to DEQ, which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the CMPU.
(9VAC5-80-110 and 40 CFR 63.11495 (d))

16. **MACT Subpart VVVVVV – Standards and Compliance Requirements –** *Emissions from metal HAP process vents*. The permittee shall comply with the requirements in Condition 16.a and 16.b for metal HAP emissions from each CMPU using Table 1 metal HAP. If the collective uncontrolled metal HAP emissions from all metal HAP process vents from a CMPU are equal to or greater than 400 lbs/yr, then the permittee shall also comply with the emission limits and other requirements in Table 4 to 40 CFR 63 Subpart VVVVVV and in 40 CFR 63.11496 (f)(3), (4), or (5). The requirements of this condition and 40 CFR 63.11496 (f) do not apply to metal HAP process vents from CMPU containing only metal HAP that are in a liquid solution or other form that will not result in particulate emissions of metal HAP (e.g., metal HAP that is in ingot, paste, slurry, or moist pellet form or other form).

a. The permittee shall determine the sum of metal HAP emissions from all metal HAP process vents within a CMPU subject to 40 CFR 63 Subpart VVVVVV, except the permittee is not required to determine the annual emissions if the permittee controls the metal HAP process vents within a CMPU in accordance with Table 4 to 40 CFR 63 Subpart VVVVVV or if the permittee determines its total metal HAP usage in the process unit is less than 400 lbs/yr. To determine the mass emission rate the permittee may use process knowledge, engineering assessment, or test data. The permittee shall keep records of the emissions calculations.

b. If the permittee's current estimate is that total uncontrolled metal HAP emissions from a CMPU subject to 40 CFR 63 Subpart VVVVVV are less than 400 lbs/yr, then the

permittee shall keep records of either the number of batches operated per month (batch vents) or the process operating hours (continuous vents). Also, the permittee shall reevaluate its total emissions before the permittee makes any process or operational change that affects emissions of metal HAP. If projected emissions increase to 400 lbs/yr or more, then the permittee shall be in compliance with one of the options for metal HAP process vents in Table 4 to 40 CFR 63 Subpart VVVVVV upon initiating operation under the new operating conditions. The permittee shall keep records of all recalculated emissions determinations.

(9VAC5-80-110 and 40 CFR 63.11496 (f))

17. **MACT Subpart VVVVVV – Standards and Compliance Requirements –** *General provisions*. The permittee shall meet the requirements of the General Provisions in 40 CFR 63 Subpart A, as shown in Table 9 to 40 CFR 63 Subpart VVVVVV.
(9VAC5-80-110 and 40 CFR 63.11501 (a))

Monitoring

18. **MACT Subpart VVVVVV – Standards and Compliance Requirements –** The permittee shall conduct inspections of process vessels and equipment for each CMPU in metal HAP service, as specified in Condition 18.a through 18.e below, to demonstrate compliance with Condition 13 and to determine that the process vessels and equipment are sound and free of leaks. Alternatively, except when the subject CMPU contains metal HAP as particulate, inspections may be conducted while the subject process vessels and equipment are in VOC service, provided that leaks can be detected when in VOC service.

    a. Inspections must be conducted at least quarterly.

    b. For these inspections, detection methods incorporating sight, sound, or smell are acceptable. Indications of a leak identified using such methods constitute a leak unless the permittee demonstrates that the indications of a leak are due to a condition other than loss of HAP. If indications of a leak are determined not to be HAP in one quarterly monitoring period, the permittee shall still perform the inspection and demonstration in the next quarterly monitoring period.

    c. As an alternative to conducting inspections, as specified in Condition 18.b, the permittee may use Method 21 of 40 CFR part 60, appendix A-7, with a leak definition of 500 ppmv to detect leaks. The permittee may also use Method 21 with a leak definition of 500 ppmv to determine if indications of a leak identified during an inspection conducted in accordance with Condition 18.b are due to a condition other than loss of HAP. The procedures in this Condition 18.c may not be used as an alternative to the inspection required by Condition 18.b for process vessels that contain metal HAP as particulate.

    d. Inspections must be conducted while the subject CMPU is operating.

e. No inspection is required in a calendar quarter during which the subject CMPU does not operate for the entire calendar quarter and is not in metal HAP service. If the CMPU operates at all during a calendar quarter, an inspection is required.

(9VAC5-80-110 and 40 CFR 63.11495 (a) (3))

Recordkeeping

19. **MACT Subpart VVVVVV – Standards and Compliance Requirements** – The permittee shall keep records of the dates and results of each inspection event, the dates of equipment repairs, and, if applicable, the reasons for any delay in repair.
(9VAC5-80-110 and 40 CFR 63.11495 (a) (5))

20. **MACT Subpart VVVVVV – Standards and Compliance Requirements** - *Recordkeeping*. The permittee shall maintain files of all information required by 40 CFR 63 Subpart VVVVVV for at least 5 years following the date of each occurrence according to the requirements in 40 CFR 63.10 (b)(1). The permittee shall maintain the following records:

    a. All documentation supporting initial notifications and notifications of compliance status under 40 CFR 63.9.

    b. Records of management practice inspections, repairs, and reasons for any delay of repair, as specified in 40 CFR 63.11495 (a)(5).

    c. Records of metal HAP emission calculations as specified in 40 CFR 63.11496 (f)(1) and (2). If total uncontrolled metal HAP process vent emissions from a CMPU subject to 40 CFR 63 Subpart VVVVVV are estimated to be less than 400 lbs/yr, also keep records of either the number of batches per month or operating hours, as specified in 40 CFR 63.11496 (f)(2).

    d. Records of the date, time, and duration of each malfunction of operation of process equipment, control devices, recovery devices, or continuous monitoring systems used to comply with 40 CFR 63 Subpart VVVVVV that causes a failure to meet a standard. The record must include a list of the affected sources or equipment, an estimate of the volume of each regulated pollutant emitted over the standard, and a description of the method used to estimate the emissions.

    e. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.11495 (d), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

    f. For metal HAP process vents subject to Table 4 to 40 CFR 63 Subpart VVVVVV, the permittee shall keep records specified in 40 CFR 63.11501 (c)(3)(i) or (ii), as applicable.

(9VAC5-80-110 and 40 CFR 63.11501 (c))

Reporting

21. **MACT Subpart VVVVVV – Standards and Compliance Requirements** - *Semiannual Compliance Reports*. The permittee shall submit semiannual compliance reports that contain the information specified in Condition 21.a through 21.d. Reports are required only for semiannual periods during which the permittee experienced any of the events described in Condition 21.a through 21.d.

    a. *Deviations*. The permittee shall clearly identify any deviation from the requirements of 40 CFR 63 Subpart VVVVVV.

    b. *Delay of leak repair*. The permittee shall provide the following information for each delay of leak repair beyond 15 days for any process equipment, storage tank, surge control vessel, bottoms receiver, and each delay of leak repair beyond 45 days for any heat exchange system with a cooling water flow rate less than 8,000 gal/min: information on the date the leak was identified, the reason for the delay in repair, and the date the leak was repaired.

    c. *Process change*. The permittee shall report each process change that affects a compliance determination and submit a new certification of compliance with the applicable requirements in accordance with the procedures specified in 40 CFR 63.11501 (b).

    d. *Malfunctions*. If a malfunction occurred during the reporting period, the report must include the number of instances of malfunctions that caused emissions in excess of a standard. For each malfunction that caused emissions in excess of a standard, the report must include a list of the affected sources or equipment, an estimate of the volume of each regulated pollutant emitted over the standard, and a description of the method used to estimate the emissions. The report must also include a description of actions the permittee took during a malfunction of an affected source to minimize emissions in accordance with 40 CFR 63.11495 (d), including actions taken to correct a malfunction.

    (9VAC5-80-110 and 40 CFR 63.11501 (d))

22. **MACT Subpart VVVVVV – Standards and Compliance Requirements** - *Report*. If the permittee seeks to assert an affirmative defense as allowed under 40 CFR 63.11501 (e)(1), the permittee shall submit a written report to DEQ, with all necessary supporting documentation, that it has met the requirements set forth in 40 CFR 63.11501 (e)(1). This affirmative defense report must be included in the first periodic compliance report, deviation report, or excess emission report otherwise required after the initial occurrence of the violation of the relevant standard (which may be the end of any applicable averaging period). If such compliance report, deviation report, or excess emission report is due less

than 45 days after the initial occurrence of the violation, the affirmative defense report may be included in the second compliance report, deviation report, or excess emission report due after the initial occurrence of the violation of the relevant standard.
(9VAC5-80-110 and 40 CFR 63.11501 (e) (2))

Insignificant Emissions Units

23. **Insignificant Emissions Units** - The following emission units at the facility are identified in the application as insignificant emission units under 9VAC5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9VAC5-80-720B)	Rated Capacity (9VAC5-80-720C)
None identified	--	--	--	--

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9VAC5-80-110.
(9VAC5-80-110)

Permit Shield & Inapplicable Requirements

24. **Permit Shield & Inapplicable Requirements** - Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of Applicability
40 CFR 60 Subpart VV	*Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction or Modification Commenced After January 5, 1981, and on or before November 7, 2006*	The Oligomers CMPU is not subject to NSPS Subpart VV because it does not produce any of the regulated chemicals listed in 40 CFR 60.489.
40 CFR 63 Subpart SS	*National Emissions Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process*	The Oligomers CMPU does not have any applicable control requirements in NESHAP Subpart VVVVVV that reference Subpart SS. As a result, Subpart SS is not applicable to the Oligomers CMPU.

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by (i) the Administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.
(9VAC5-80-110 and 9VAC5-80-140)

General Conditions

25. **General Conditions - Federal Enforceability -** All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.
(9VAC5-80-110)

26. **General Conditions - Permit Expiration**

    a. This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the Department consistent with the requirements of 9VAC5-80-80, the right of the facility to operate shall be terminated upon permit expiration.

    b. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.

    c. If an applicant submits a timely and complete application for an initial permit or renewal under 9VAC5-80-80 F, the failure of the source to have a permit or the

operation of the source without a permit shall not be a violation of Article 1, Part II of 9VAC5 Chapter 80, until the Board takes final action on the application under 9VAC5-80-150.

d. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9VAC5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9VAC5 Chapter 80.

e. If an applicant submits a timely and complete application under section 9VAC5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9VAC5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.

f. The protection under subsections F 1 and F 5 (ii) of section 9VAC5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9VAC5-80-80 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.

(9VAC5-80-80, 9VAC5-80-110 and 9VAC5-80-170)

27. **General Conditions - Recordkeeping and Reporting** - All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:

a. The date, place as defined in the permit, and time of sampling or measurements;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of such analyses; and

f. The operating conditions existing at the time of sampling or measurement.

(9VAC5-80-110)

28. **General Conditions - Recordkeeping and Reporting** - Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration

and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
(9VAC5-80-110)

29. **General Conditions - Recordkeeping and Reporting** - The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than March 1 and September 1 of each calendar year. This report must be signed by a responsible official, consistent with 9VAC5-80-80 G, and shall include:

    a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31; and

    b. All deviations from permit requirements. For purpose of this permit, deviations include, but are not limited to:

        i. Exceedances of emissions limitations or operational restrictions;

        ii. Excursions from control device operating parameter requirements, as documented by continuous emission monitoring or periodic monitoring, or Compliance Assurance Monitoring (CAM) which indicates an exceedance of emission limitations or operational restrictions; or,

        iii. Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

    c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that "no deviations from permit requirements occurred during this semiannual reporting period."

    (9VAC5-80-110)

30. **General Conditions - Annual Compliance Certification** - Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than March 1 each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices for the period ending December 31. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a) (3) and §504(b) of the federal Clean Air Act. The permittee shall maintain a copy of the certification for five (5) years after submittal of the certification. This certification shall be signed by a responsible official, consistent with 9VAC5-80-80 G, and shall include:

    a. The time period included in the certification. The time period to be addressed is January 1 to December 31;

b. The identification of each term or condition of the permit that is the basis of the certification;

c. The compliance status;

d. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance;

e. Consistent with subsection 9VAC5-80-110, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period;

f. Such other facts as the permit may require to determine the compliance status of the source; and

g. One copy of the annual compliance certification shall be submitted to EPA in electronic format only. The certification document should be sent to the following electronic mailing address:

R3_APD_Permits@epa.gov

(9VAC5-80-110)

31. **General Conditions - Permit Deviation Reporting** - The permittee shall notify the Blue Ridge Regional Office within four daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. The occurrence should also be reported in the next semiannual compliance monitoring report pursuant to Condition 29 of this permit. (9VAC5-80-110 F. 2)

32. **General Conditions - Failure/Malfunction Reporting** - In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall no later than four daytime business hours after the malfunction is discovered, notify the Blue Ridge Regional Office such failure or malfunction and within 14 days provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Blue Ridge Regional Office. (9VAC5-80-110 and 9VAC5-20-180)

33. **General Conditions - Severability** - The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any

circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.
(9VAC5-80-110)

34. **General Conditions - Duty to Comply** - The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is ground for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.
(9VAC5-80-110)

35. **General Conditions - Need to Halt or Reduce Activity not a Defense** - It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
(9VAC5-80-110)

36. **General Conditions - Permit Modification** - A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9VAC5-80-50, 9VAC5-80-1100, 9VAC5-80-1605, or 9VAC5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios.
(9VAC80-110, 9VAC5-80-190, and 9VAC5-80-260)

37. **General Conditions - Property Rights** - The permit does not convey any property rights of any sort, or any exclusive privilege.
(9VAC5-80-110)

38. **General Conditions - Duty to Submit Information** - The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality.
(9VAC5-80-110)

39. **General Conditions - Duty to Submit Information** - Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9VAC5-80-80 G.
(9VAC5-80-110)

40. **General Conditions - Duty to Pay Permit Fees** - The owner of any source for which a permit was issued under 9VAC5-80-50 through 9VAC5-80-300 shall pay annual emissions fees, as applicable, consistent with the requirements of 9VAC5-80-310 through 9VAC5-80-

350 and annual maintenance fees, as applicable, consistent with the requirements of 9VAC5-80-2310 through 9VAC5-80-2350.
(9VAC5-80-110, 9VAC5-80-310 et seq., and 9VAC5-80-2310 et seq.)

41. **General Conditions - Fugitive Dust Emission Standards** - During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

    a. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;

    b. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;

    c. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or similar operations;

    d. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,

    e. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

    (9VAC5-80-110 and 9VAC5-50-90)

42. **General Conditions - Startup, Shutdown, and Malfunction** - At all times, including periods of startup, shutdown, and soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
(9VAC5-80-110 and 9VAC5-50-20 E)

43. **General Conditions - Alternative Operating Scenarios** - Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9VAC5-80-140 shall extend to

all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9VAC5 Chapter 80, Article 1.
(9VAC5-80-110)

44. **General Conditions - Inspection and Entry Requirements** - The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

    a. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.

    b. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.

    c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.

    d. Sample or monitor at reasonable times' substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

    (9VAC5-80-110)

45. **General Conditions - Reopening for Cause** - The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9VAC5-80-80 F. The conditions for reopening a permit are as follows:

    a. The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

    b. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

    c. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9VAC5-80-110 D.

    (9VAC5-80-110)

46. **General Conditions - Permit Availability** - Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request. (9VAC5-80-110 and 9VAC5-80-150)

47. **General Conditions - Transfer of Permits**

    a. No person shall transfer a permit from one location to another, unless authorized under 9VAC5-80-130, or from one piece of equipment to another.

    b. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9VAC5-80-200.

    c. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9VAC5-80-200.

    (9VAC5-80-110 and 9VAC5-80-160)

48. **General Conditions - Permit Revocation or Termination for Cause** - A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9VAC5 Chapter 80 Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe any permit for any grounds for revocation or termination or for any other violations of these regulations.
(9VAC5-80-110, 9VAC5-80-190 C, and 9VAC5-80-260)

49. **General Conditions - Duty to Supplement or Correct Application** - Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.
(9VAC5-80-110 and 9VAC5-80-80 E)

50. **General Conditions - Stratospheric Ozone Protection** - If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.
(9VAC5-80-110 and 40 CFR Part 82)

51. **General Conditions - Asbestos Requirements** - The permittee shall comply with the requirements of National Emissions Standards for Hazardous Air Pollutants (40 CFR 61) Subpart M, National Emission Standards for Asbestos as it applies to the following: Standards for Demolition and Renovation (40 CFR 61.145), Standards for Insulating Materials (40 CFR 61.148), and Standards for Waste Disposal (40 CFR 61.150). (9VAC5-60-70 and 9VAC5-80-110)

52. **General Conditions - Accidental Release Prevention** - If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68. (9VAC5-80-110 and 40 CFR Part 68)

53. **General Conditions - Changes to Permits for Emissions Trading** - No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.
(9VAC5-80-110)

54. **General Conditions - Emissions Trading** - Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

    a. All terms and conditions required under 9VAC5-80-110, except subsection N, shall be included to determine compliance.

    b. The permit shield described in 9VAC5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.

    c. The owner shall meet all applicable requirements including the requirements of 9VAC5-80-50 through 9VAC5-80-300.

    (9VAC5-80-110)